**Intended Use**

Remel MacConkey Broth is a liquid medium recommended for use in qualitative procedures for selective isolation and presumptive identification of Enterbacteriaceae.

**Summary and Explanation**

MacConkey Broth is a modification of the original bile salt broth first described by MacConkey in 1901.

Oxgall in the medium serves to inhibit growth of gram positive organisms. Bromcresol purple is an indicator of lactose fermentation.

**Principle**

Peptone provides nitrogenous compounds and amino acids necessary for bacterial growth. Lactose is a carbon source for energy. The selective agent, oxgall, inhibits most gram positive organisms. Lactose and bromcresol purple indicator enable the differentiation of lactose-fermenting gram negative bacilli. Lactose fermenters (i.e. coliforms) cause the medium to change from purple to yellow and produce gas bubbles.

**Procedure**

For use with Meridian ImmunoCard STAT! EHEC

1. Use an applicator stick to mix stool thoroughly, regardless of consistency.
2. **Unpreserved specimen**:

**Pipetable stool**: Add 50 uL of unpreserved stool specimen (first mark from tip of ImmunoCard STAT!

 EHEC pipette) into 5ml MacConkey Broth tube.

 **Non-pipetable stool**: Use a wooden applicator stick to transfer a 3-4mm round pellet of stool into

 5ml MacConkey Broth tube.

1. **Specimen collected in Modified Carry Blair Medium (Para Pak C & S vials, orange lids**):

 Add 175 uL of the preserved specimen (second mark from tip of ImmunoCard STAT! EHEC pipette)

 to 5ml MacConkey broth tube.

1. Incubate inoculated broth with caps loose at 34-36°C for 16-24 hrs.
2. If ImmunoCard STAT! EHEC testing cannot be performed on MacConkey Broths after 16-24 hrs of incubation, MacConkey Broths may be held for up to 7 days at 2-8°C. (Do not proceed with EHEC testing on broths which do not exhibit growth or falsely negative results may occur.)

**Interpretation**

**Lactose Fermentation:**

Positive Test - Yellow color development

Negative Test - No color Change

**Gas Formation:**

Positive Test - Formation of bubbles

Negative Test - No bubbles formed

**Quality Control**

Each lot number of MacConkey Broth has been manufactured, packaged, and processed in accordance with current Good Manufacturing Practice regulations. All lot numbers have been tested using quality control organisms and have been found to be acceptable. This quality control testing meets or exceeds harmonized USP/EP guidelines for microbial limits testing.

Perform Quality Control testing upon arrival of each shipment and/or lot number.

**Control Organisms**: **Incubation**: **Results**:

Escherichia coli ATCC 25922 16-24 hrs, 34-36°C, cap loosened Growth, Lactose (+), Gas (+)

Staphylococcus aureus ATCC 25923 16-24 hrs, 34-36°C, cap loosened Inhibition (partial to complete)

**Safety**

* Observe approved biohazard precautions and aseptic techniques.
* Caution should be used to minimize splashes and spills of medium during specimen collection and testing.
* Pathogenic organisms, including hepatitis viruses and HIV, may be present in clinical specimens. “Standard Precautions” should be followed in handling all items contaminated with blood and other body fluids.
* Dispose of all biohazard waste including specimens, containers and media after their use in approved biohazard containers.

**Reference**

MacConkey Broth Package Insert, Remel 12076 Santa Fe Drive, Lenexa, KS 66215. IFU 61336-MLT, Rev. May 15,2012

ImmunoCard STAT EHEC Broth Method, SN11169 CLSI 04/10, Meridian Bioscience, Inc. Cincinnati, OH 45244